

Atty. Docket No.: PU4112US2
S/N 10/038,694

REMARKS

Claims 9-19 are pending in this application. The Examiner has withdrawn the previous rejection of claims 9-19 under 35 U.S.C. 112 first paragraph.

The Examiner has maintained the rejection of claims 9-10 under 35 USC section 103 (a) as being unpatentable over Rosenberg (US 4,894,440) in view of Warmen et al. (US 2002/0137894, Flannery et al and Chubinskaya et al (US 2002/0052358).

The Examiner states that Rosenberg teaches MS purified to homogeneity from serum-free conditioned medium obtained from cultured human embryonic kidney cells. The Examiner notes that Rosenberg does not teach the use of chondrocytes.

According to the Examiner's rejection, Warmen shows chondrocytes make CACP (MSF/SZP) and suggests that "bovine chondrocytes would make SZP." The Office Action also states Flannery teaches SZP may be purified from bovine chondrocytes and Chubinskaya teaches immortalized/non-immortalized mammalian chondrocytes. The Examiner combines the references to conclude "it would have been obvious to the person of ordinary skill in the art at the time the invention was made to use immortalized or non-immortalized chondrocytes in the method of Rosenberg *et al.*"

Similarly claims 11-19 are rejected under 35 USC section 103 (a) as being unpatentable over Rosenberg (US 4,894,440) in view of Turner (US 2002/137894). The Examiner states Rosenberg does not expressly teach exogenous expression of MSF in cultured cells but suggests the MSF may be produced in genetically engineered organisms, or modified MSF may be produced. The Examiner states Turner teaches genetically engineered MSF for intracellular expression in bacterial host. The Examiner concludes that the references taken together teach the method of claims 11-19.

In the Applicants previous response, Applicants traversed the rejections on the basis that Rosenberg is not relevant art because the term "megakaryocyte stimulating factor" disclosed in Rosenberg is associated with thrombopoietin and is not the same as the "megakaryocyte stimulating factor" associated with SZP. The Examiner was not persuaded that "megakaryocyte stimulating factor" in Rosenberg was thrombopoietin and indicated that the megakaryocyte stimulating factor was not listed as a designation for thrombopoietin in the Human Gene Nomenclature database.

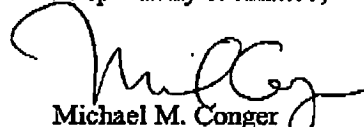
Atty. Docket No.: PU4112US2
S/N 10/038,694

Applicants provide herewith search results from NCBI Entrez Gene database showing the term "megakaryocyte stimulating factor" has been used as a designation for both THPO (thrombopoietin) and PRG4 (Superficial zone protein). Since the Rosenberg reference is directed to thrombopoietin and not to superficial zone protein, it would not be obvious for one of ordinary skill in the art to use the methods of Rosenberg in combination with the other cited references to isolate SZP according to applicants' claimed method. Applicants respectfully request the rejections be withdrawn.

Claim 11 has been amended to correct typographical errors and thereby place the claims in condition for allowance.

Applicants believe that no fees are due in connection with the filing of this paper other than those specifically authorized herewith. However, should any other fees be deemed necessary to effect the timely filing of this paper the Commissioner is hereby authorized to charge such fees to Deposit Account No. 07-1392.

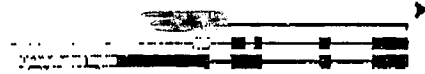
Respectfully submitted,


Michael M. Conger
Attorney for Applicants
Registration No. 43.562

Date: January 27, 2005
GlaxoSmithKline
Five Moore Drive, PO Box 13398
Research Triangle Park
North Carolina 27709
Telephone: (919)483-2474
Facsimile: (919)483-7988



Entrez Gene


[Entrez](#)
[PubMed](#)
[Nucleotide](#)
[Protein](#)
[Genome](#)
[Structure](#)
[PMC](#)
[Taxonomy](#)
[Books](#)
[ON](#)

 Search: Gene

☐ for "megakaryocyte stimulating factor"

☒ current records on

☒ Limits

[Preview/Index](#)
[History](#)
[Clipboard](#)
[Details](#)

 Limits: **Homo sapiens**

[Summary](#)

Show: 20

[Text](#)
☐

Items 1 - 2 of 2

One page.

[Entrez](#)
[SITE MAP](#)
[Entrez Help](#)
[Gene](#)
[Search](#)
[Gene Help](#)
[FAQ](#)
[FTP site](#)
[Related sites](#)
[Entrez Genome](#)
[Genomic Biology](#)
[HomoloGene](#)
[LocusLink](#)
[Map Viewer](#)
[OMIM](#)
[RefSeq](#)
[UniGene](#)
[Feedback](#)
[Help Desk](#)
[Corrections](#)
[About GeneRIFs](#)
[Subscriptions](#)
[RefSeq](#)
[Gene](#)
[Map Viewer](#)
☐ 1: **PRG4**
[Links](#)

 proteoglycan 4 [*Homo sapiens*]

Other Aliases: HGNC:9364, CACP, HAPO, JCAP, MSF, SZP, bG174L6.2

Other Designations: Jacobs camptodactyly-arthropathy-pericarditis syndrome gene; articular superficial zone protein; bG174L6.2 (MSF: megakaryocyte stimulating factor); camptodactyly, arthropathy, coxa vara, pericarditis syndrome gene; megakaryocyte stimulating factor; proteoglycan 4, (megakaryocyte stimulating factor, articular superficial zone protein, camptodactyly, arthropathy, coxa vara, pericarditis syndrome)

Chromosome: 1; **Location:** 1q25-q31

GeneID: 10216

☐ 2: **THPO**
[Links](#)

 thrombopoietin (myeloproliferative leukemia virus oncogene ligand, megakaryocyte growth and development factor) [*Homo sapiens*]

Other Aliases: HGNC:11795, MGDF, MKCSF, ML, MPLLG, TPO

Other Designations: MPL ligand; c-mpl ligand; megakaryocyte colony-stimulating factor; megakaryocyte growth and development factor; megakaryocyte stimulating factor; myeloproliferative leukemia virus oncogene ligand; thrombopoietin

Chromosome: 3; **Location:** 3q27

GeneID: 7066

[Restrictions on Use](#) | [Write to the Help Desk](#)
[NCBI](#) | [NLM](#) | [NIH](#)

Jan 25 2005 16:15:24